STN-Structure Search

11/13/07

10/586,133

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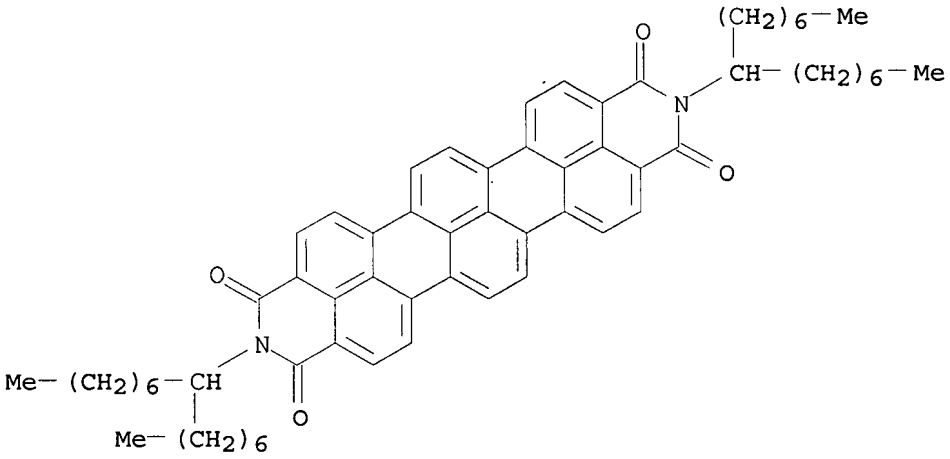
L9 ANSWER 1 OF 15 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2007:1142135 CAPLUS
DOCUMENT NUMBER: 147:460106
TITLE: Liquid crystalline polycyclic aromatic tetracarboxylic acid derivatives as n-type semiconductors for use in organic field effect transistors and solar cells
INVENTOR(S): Koenemann, Martin; Pschirer, Neil Gregory; Muellen, Klaus; Nolde, Fabian; Pisula, Wojcieh; Mueller, Sybille; Kohl, Christopher
PATENT ASSIGNEE(S): BASF Aktiengesellschaft, Germany
SOURCE: Eur. Pat. Appl., 76pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 1843407	A1	20071010	EP 2006-7415	20060407
R: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LI, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, AL, BA, HR, MK, YU				
WO 2007116001	A2	20071018	WO 2007-EP53330	20070404
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BH, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, SV, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW				
RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, MT, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				

PRIORITY APPLN. INFO.: EP 2006-7415 A 20060407
GI



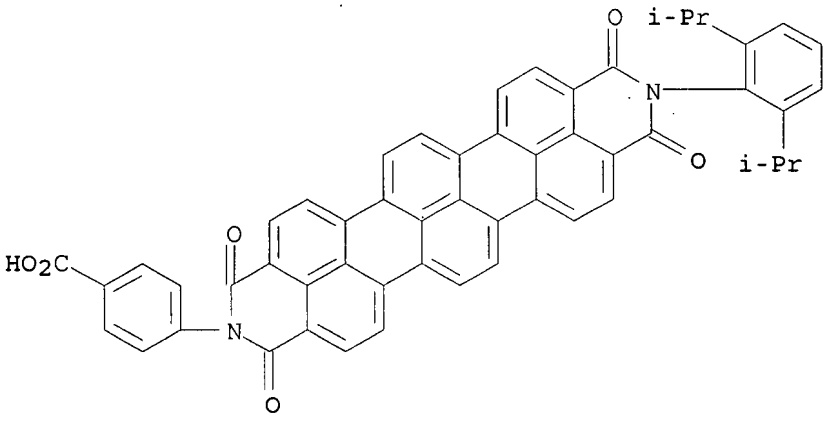
REFERENCE COUNT: 11 THERE ARE 11 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9 ANSWER 2 OF 15 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2007:538955 CAPLUS
DOCUMENT NUMBER: 146:524948
TITLE: Use of rylene derivatives as photosensitizers in solar cells
INVENTOR(S): Pschirer, Neil Gregory; Eickemeyer, Felix; Schoeneboom, Jan; Qu, Jianqiang; Koenemann, Martin; Muellen, Klaus; Li, Chen; Herrmann, Andreas; Erk, Peter; Nordmann, Gero; Kuhn, Alfred; Hagfeldt, Anders; Edvinsson, Tomas
PATENT ASSIGNEE(S): Basf A.-G., Germany; Max-Planck-Gesellschaft zur Foerderung der Wissenschaft E. V.
SOURCE: PCT Int. Appl., 179pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

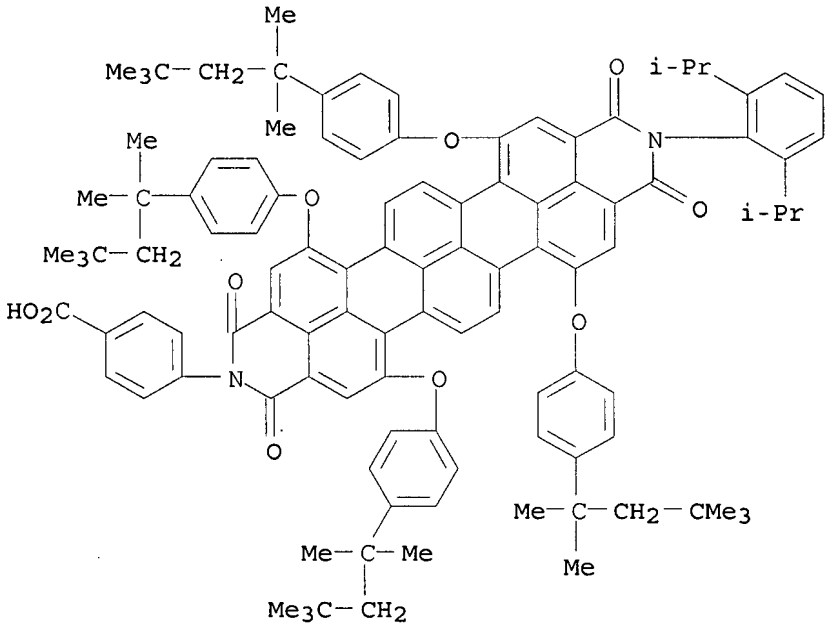
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2007054470	A1	20070518	WO 2006-EP68102	20061106
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, SV, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW				
RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
DE 102005053995	A1	20070524	DE 2005-102005053995	20051110
PRIORITY APPLN. INFO.:			DE 2005-102005053995A	20051110

OTHER SOURCE(S): MARPAT 146:524948

AB Rylene derivs. are prepared and described for use as photosensitizers for solar cells. These derivs., which have a high incident photon-to-current conversion efficiency, are especially useful in solar cells for the decomposition of



RN 937041-05-9 CAPLUS
CN Benzoic acid, 4-[11-[2,6-bis(1-methylethyl)phenyl]-3,10,11,12-tetrahydro-1,3,10,12-tetraoxo-5,8,14,17-tetrakis[4-(1,1,3,3-tetramethylbutyl)phenoxy]benzo[13,14]pentapheno[3,4,5-def:10,9,8-d'e'f']diisoquinolin-2(1H)-yl]- (CA INDEX NAME)



REFERENCE COUNT: 9 THERE ARE 9 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9 ANSWER 3 OF 15 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2007:145897 CAPLUS
DOCUMENT NUMBER: 146:230989
TITLE: Rylene-based multi-chromophore dyes
INVENTOR(S): Koenemann, Martin
PATENT ASSIGNEE(S): Basf Aktiengesellschaft, Germany
SOURCE: PCT Int. Appl., 110pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2007014902	A2	20070208	WO 2006-EP64733	20060727
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW				
RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
DE 102005037115	A1	20070208	DE 2005-102005037115	20050803
PRIORITY APPLN. INFO.:			DE 2005-102005037115A	20050803
OTHER SOURCE(S):	MARPAT 146:230989			

GI

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

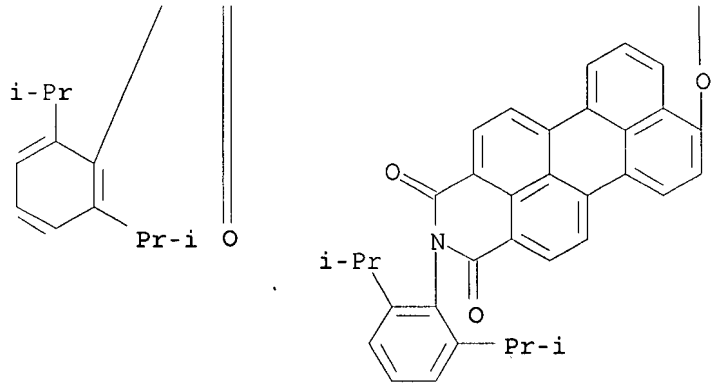
AB Functionalized with imide-, ester-, or amide groups rylene-based multi-chromophore dyes optionally addnl. substituted with aryloxy, arylthio, heteroaryloxy and/or heteroarylthio groups are useful for coloring organic and inorg. materials, for invisible IR-absorbing markings, as IR absorbers in thermal management, for laser marking, as semiconductor materials for organic electronics, , as emitters in chemiluminescent applications, as markers for detection techniques, and as active components in photovoltaic technol. Thus, mixing 24 h at 80° 30 mL N-methylpyrrolidone, 4.15 g K2CO3, 6.60 g hydroquinone and 4.15 g N-(2,6-diisopropylphenyl)-4-chloronaphthalenedicarboxylic acid imide gave rylene dicarboxylic acid imide (I), which was used for manufacture a mixture of isomers II and III having absorption maximum 351.52 nm and fluorescent maximum 575 nm (CH2Cl2) by mixing 28 h at room temperature under N2 4.6 g I, 0.86 g K2CO3, 50 mL N-methylpyrrolidone and 4.34 g a mixture of N,N'-bis(2,6-diisopropylphenyl)-1,7- and 1,6-dibromoperylene-3,4:9,10-tetracarboxylic acid diimides at ratio 75:25.

IT 923584-49-0P 923584-57-0P
RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)
(functionalized with imide-, ester-, or amide groups rylene-based multi-chromophore dyes)

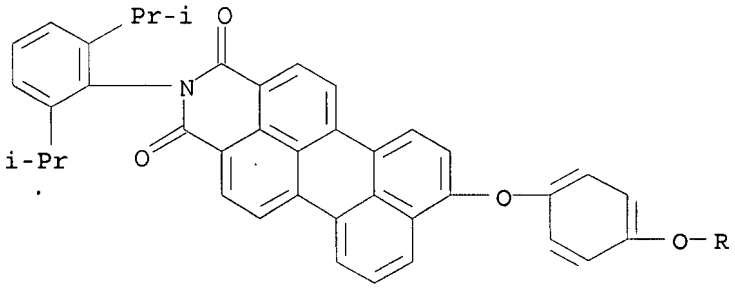
RN 923584-49-0 CAPLUS

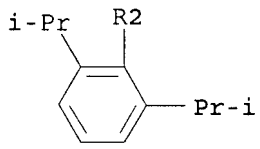
CN 1H-Perylo[3,4-cd]pyridine-1,3(2H)-dione, 2-[2,6-bis(1-methylethyl)phenyl]-8-(4-hydroxyphenoxy)- (CA INDEX NAME)

PAGE 3-A



PAGE 4-A





L9 ANSWER 4 OF 15 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2007:53927 CAPLUS
DOCUMENT NUMBER: 146:144285
TITLE: Substituted rylene derivatives and their uses
INVENTOR(S): Koenemann, Martin; Boehm, Arno; Pschirer, Neil Gregory; Qu, Jianqiang; Mattern, Gabriele
PATENT ASSIGNEE(S): BASF Aktiengesellschaft, Germany
SOURCE: PCT Int. Appl., 55pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2007006717	A1	20070118	WO 2006-EP63955	20060706

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP,

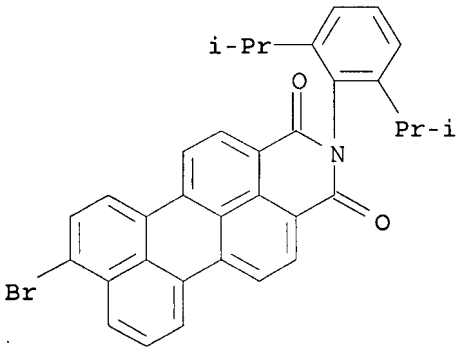
KR, KZ, LA, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW
RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM

DE 102005032583 A1 20070125 DE 2005-102005032583 20050711
PRIORITY APPLN. INFO.: DE 2005-102005032583A 20050711
OTHER SOURCE(S): MARPAT 146:144285

AB Rylene derivs., especially perylene derivs. and terrylene derivs., are described which comprise a rylene group (a conjugated polycyclic ring system with ≥1 perylene unit which may include heteroatoms as ring atoms and which may be functionalized by CO groups) with 1-8 substituents selected from substituted Ph groups joined to the rylene group via a S or O atom. The derivs. may be used for coloring organic and inorg. materials, in the production of electromagnetic radiation-absorbing and/or emitting aqueous polymer dispersions, for invisible IR-absorbing markings, as IR absorbers in thermal management, as IR laser absorbers for welding plastics, for laser marking, as semiconductor materials for organic electronics, as filters or emitters for displays, as emitters in chemiluminescent applications, as markers for detection techniques, and as active components in photovoltaic technol.

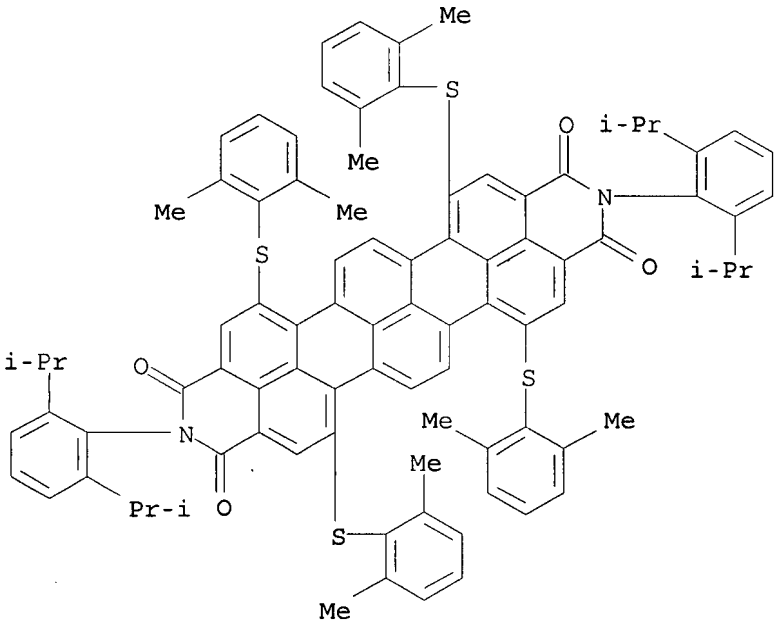
IT 165550-62-9
RL: RCT (Reactant); RACT (Reactant or reagent)
(substituted rylene derivs. and their uses)

RN 165550-62-9 CAPLUS
CN 1H-Perylo[3,4-cd]pyridine-1,3(2H)-dione, 2-[2,6-bis(1-methylethyl)phenyl]-8-bromo- (CA INDEX NAME)



IT 919488-80-5P 919488-85-0P
RL: SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(substituted rylene derivs. and their uses)

RN 919488-80-5 CAPLUS
CN Benzo[13,14]pentapheno[3,4,5-def:10,9,8-d'e'f']diisoquinoline-1,3,10,12(2H,11H)-tetrone, 5,8,14,17-tetrakis[2,6-bis(1-methylethyl)phenoxy]-2,11-bis[2,6-bis(1-methylethyl)phenyl]- (CA INDEX NAME)

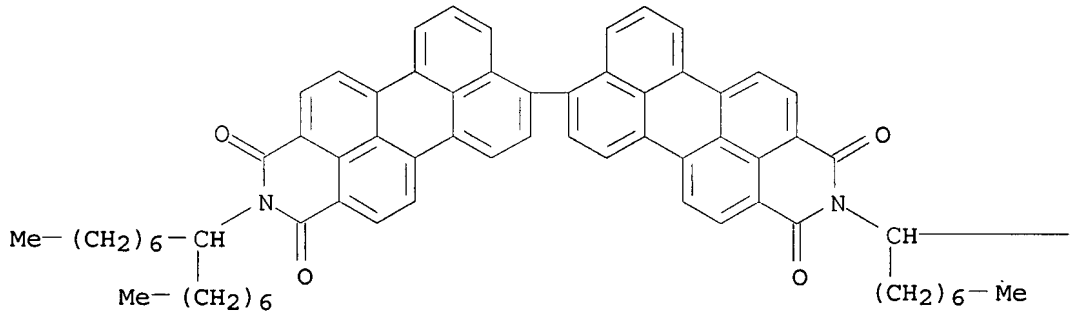


REFERENCE COUNT: 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9 ANSWER 5 OF 15 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2006:685234 CAPLUS
DOCUMENT NUMBER: 145:314798
TITLE: Synthesis and Self-Organization of Core-Extended Perylene Tetracarboxdiimides with Branched Alkyl Substituents
AUTHOR(S): Nolde, Fabian; Pisula, Wojciech; Mueller, Sibylle; Kohl, Christopher; Muellen, Klaus
CORPORATE SOURCE: Max-Planck-Institute for Polymer Research, Mainz, D-55128, Germany
SOURCE: Chemistry of Materials (2006), 18(16), 3715-3725 CODEN: CMATEX; ISSN: 0897-4756
PUBLISHER: American Chemical Society
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 145:314798

AB The influence of the core extension of perylene tetracarboxdiimides on the thermotropic behavior has been investigated. A homologous series of alkyl-substituted tetracarboxdiimides, namely, perylene diimide, terrylene diimide, quaterrylene diimide, and coronene diimide, was synthesized. These compds. display absorption maxima in the region of 430-760 nm with high extinction coeffs. and show a high thermal stability up to 450 °C. Structural evaluation revealed an identical columnar self-organization for the derivs. below their isotropization temperature An intracolumnar packing of the disks with a lateral rotation of 45° to each other resulted in a helical pitch containing four mols. The phase transition to the isotropic phase is shifted to higher temps. for larger aromatic cores within this series of compds. On the other hand, differences in the self-assembly during crystallization from the isotropic phase were observed
While perylene tetracarboxdiimide and terrylene tetracarboxdiimide formed large and highly ordered domains with arranged edge-on mols., the coronene tetracarboxdiimide disks self-organized face-on leading to a homeotropic phase. The different mol. orientation on surfaces was correlated with diversified substitution patterns of the aromatic cores. The manipulation of

PAGE 1-A



PAGE 1-B

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REFERENCE COUNT: 44 THERE ARE 44 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

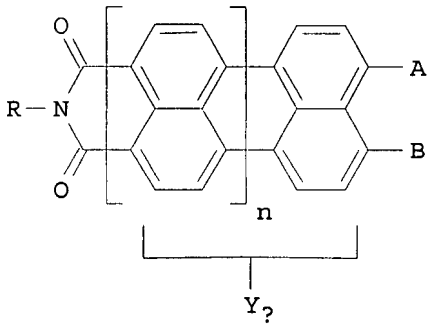
L9 ANSWER 6 OF 15 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2006:319510 CAPLUS
DOCUMENT NUMBER: 144:370076
TITLE: Halogenation process for the production of halogenated polycyclic aromatic carboxylic acid imides
PATENT ASSIGNEE(S): BASF A.-G., Germany
SOURCE: Ger. Offen., 11 pp.
CODEN: GWXXBX
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 102004048729	A1	20060406	DE 2004-102004048729	20041005
WO 2006037539	A1	20060413	WO 2005-EP10490	20050928
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
EP 1802622	A1	20070704	EP 2005-792312	20050928

R: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LI, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR

CN 101035788 A 20070912 CN 2005-80033754 20050928
PRIORITY APPLN. INFO.: DE 2004-102004048729A 20041005
WO 2005-EP10490 W 20050928
OTHER SOURCE(S): MARPAT 144:370076

GI



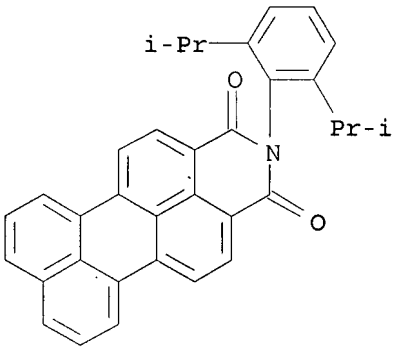
I

AB Halogenated polycyclic aromatic carboxylic acid imides [I; A, B taken together form an imide group OCNR1CO, or if n = 1 then A, B = halogen H; R, R1 = hydrogen, (un)substituted alkyl, cycloalkyl, aryl, heteroaryl; Y = chlorine, bromine, iodine; n= 1-3; x = 2-8; e.g., N,N'-bis(2,6-diisopropylphenyl)hexabromoquaterrylene-3,4:13,14-tetracarboxylic diimide] are prepared in high yield and selectivity by halogenation of the unhalogenated imide or diimide with elemental halogen in the presence of an inert organic solvent and one exts. the hydrogen halide formed during the conversion from the solvent continuously.

IT 165550-61-8
RL: RCT (Reactant); RACT (Reactant or reagent)
(halogenation process for the production of halogenated polycyclic aromatic carboxylic acid imides)

RN 165550-61-8 CAPLUS

CN 1H-Perylo[3,4-cd]pyridine-1,3(2H)-dione, 2-[2,6-bis(1-methylethyl)phenyl]- (CA INDEX NAME)

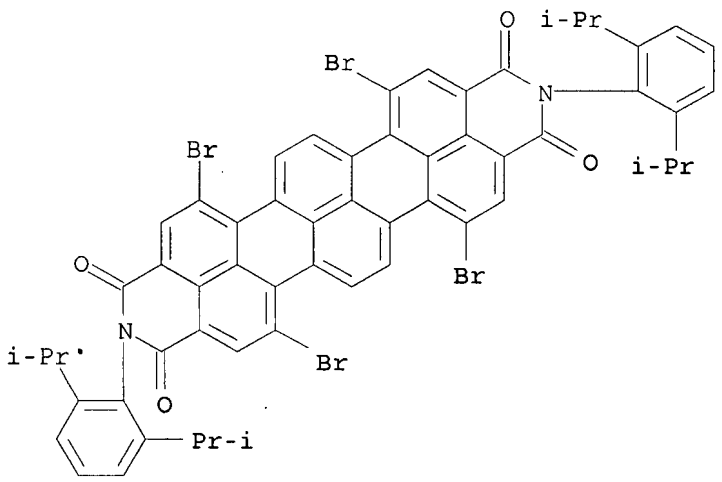


IT 464885-23-2P
RL: SPN (Synthetic preparation); PREP (Preparation)
(halogenation process for the production of halogenated polycyclic aromatic carboxylic acid imides)

RN 464885-23-2 CAPLUS

CN Benzo[13,14]pentapheno[3,4,5-def:10,9,8-d'e'f']diisoquinoline-

1,3,10,12(2H,11H)-tetrone, 2,11-bis[2,6-bis(1-methylethyl)phenyl]-5,8,14,17-tetrabromo- (CA INDEX NAME)



Inventor

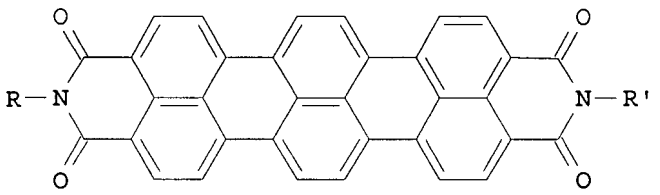
L9 ANSWER 7 OF 15 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2005:696881 CAPLUS
DOCUMENT NUMBER: 143:195248
TITLE: Method for the production of terrylene-3,4,11,12-tetracarboxylic diimides by direct synthesis
INVENTOR(S): Koenemann, Martin; Boehm, Arno; Helfer, Willi; Romeis, Juergen; Qu, Jianqiang; Muellen, Klaus
PATENT ASSIGNEE(S): BASF Aktiengesellschaft, Germany; Max-Planck-Gesellschaft zur Foerderung Der Wissenschaften E.V.
SOURCE: PCT Int. Appl., 23 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2005070895	A1	20050804	WO 2005-EP378	20050115
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
DE 102004003734	A1	20050811	DE 2004-102004003734	20040123
EP 1711469	A1	20061018	EP 2005-700962	20050115
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, FI, RO, CY, TR, BG, CZ, EE, HU, PL, SK, IS				
CN 1910155	A	20070207	CN 2005-80002917	20050115
JP 2007522121	T	20070809	JP 2006-549994	20050115
US 2007155968	A1	20070705	US 2006-586133	20060717

PRIORITY APPLN. INFO.: DE 2004-102004003734A 20040123
WO 2005-EP378 W 20050115

OTHER SOURCE(S): CASREACT 143:195248; MARPAT 143:195248
GI

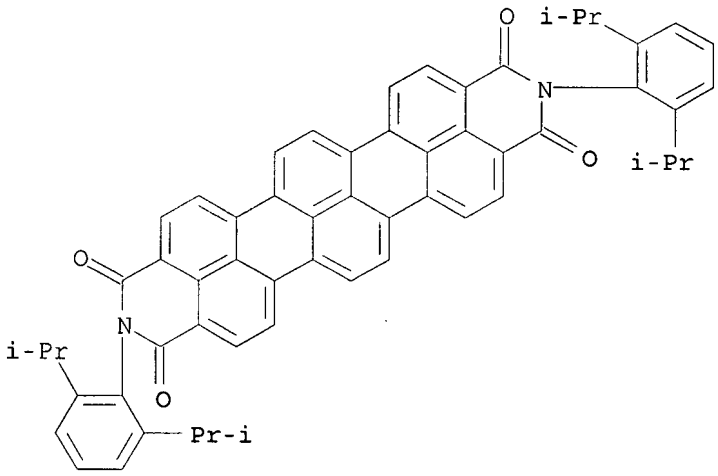


I

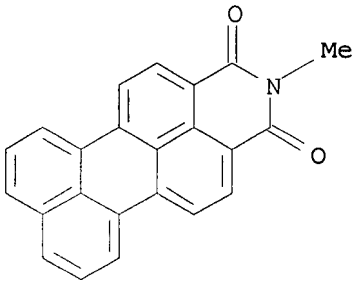
AB The invention relates to a method for the production of diimides I: R, R' independently are H, optionally substituted alkyl or cycloalkyl, aryl or heteroaryl, R1 = H or alkyl; R2 = H, alkyl, optionally substituted aryl or heteroaryl, whereby a N-substituted perylene-3,4-dicarboxylic acid imide is reacted with a N-substituted naphthalene-1,8-dicarboxylic acid imide optionally substituted at the 4 position with Br or Cl in the presence of a base-stable, high boiling organic solvent and an alkali or alkaline earth metal base.

IT 187536-95-4P 452084-79-6P 634613-10-8P
634613-13-1P 634613-14-2P 861411-09-8P
RL: IMF (Industrial manufacture); PREP (Preparation)
(production of terrylenetetracarboxylic diimides by cyclization of corresponding naphthalenedicarboxylic acid imides with perylenedicarboxylic acid imides)

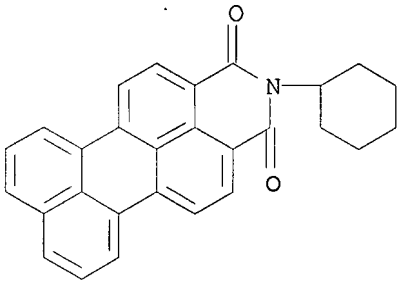
RN 187536-95-4 CAPLUS
CN Benzo[13,14]pentapheno[3,4,5-def:10,9,8-d'e'f']diisoquinoline-1,3,10,12(2H,11H)-tetrone, 2,11-bis[2,6-bis(1-methylethyl)phenyl]- (9CI) (CA INDEX NAME)



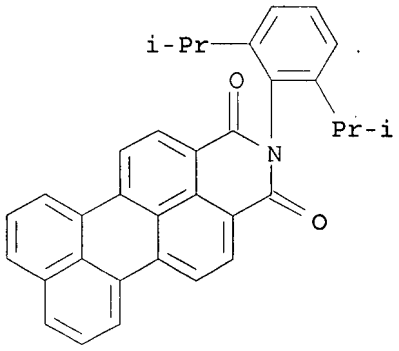
RN 452084-79-6 CAPLUS
CN Benzo[13,14]pentapheno[3,4,5-def:10,9,8-d'e'f']diisoquinoline-1,3,10,12(2H,11H)-tetrone, 2-[2,6-bis(1-methylethyl)phenyl]-11-cyclohexyl- (9CI) (CA INDEX NAME)



RN 165261-30-3 CAPLUS
CN 1H-Perylo[3,4-cd]pyridine-1,3(2H)-dione, 2-cyclohexyl- (9CI) (CA INDEX NAME)



RN 165550-61-8 CAPLUS
CN 1H-Perylo[3,4-cd]pyridine-1,3(2H)-dione, 2-[2,6-bis(1-methylethyl)phenyl]- (CA INDEX NAME)



REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

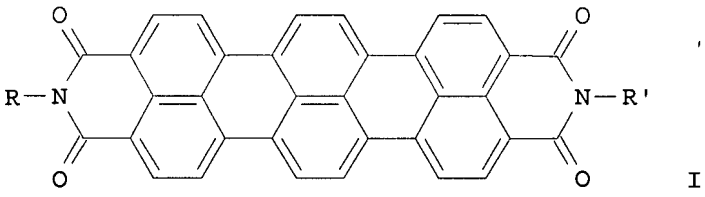
L9 ANSWER 8 OF 15 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2005:696880 CAPLUS
DOCUMENT NUMBER: 143:195247
TITLE: Method for producing terrylene-3,4,11,12-tetracarboxylic acid diimides
INVENTOR(S): Koenemann, Martin; Muellen, Klaus; Reuther, Erik
PATENT ASSIGNEE(S): BASF Aktiengesellschaft, Germany; Max-Planck-Gesellschaft zur Foerderung Der Wissenschaften E.V.
SOURCE: PCT Int. Appl., 37 pp.
CODEN: PIXXD2

10/586,133

DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

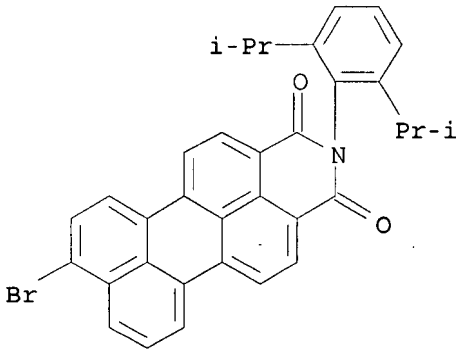
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2005070894	A1	20050804	WO 2005-EP314	20050114
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
DE 102004003735	A1	20050811	DE 2004-102004003735	20040123
EP 1713777	A1	20061025	EP 2005-700915	20050114
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, FI, RO, CY, TR, BG, CZ, EE, HU, PL, SK, IS				
PRIORITY APPLN. INFO.:			DE 2004-102004003735A	20040123
			WO 2005-EP314 W	20050114

OTHER SOURCE(S): MARPAT 143:195247
GI

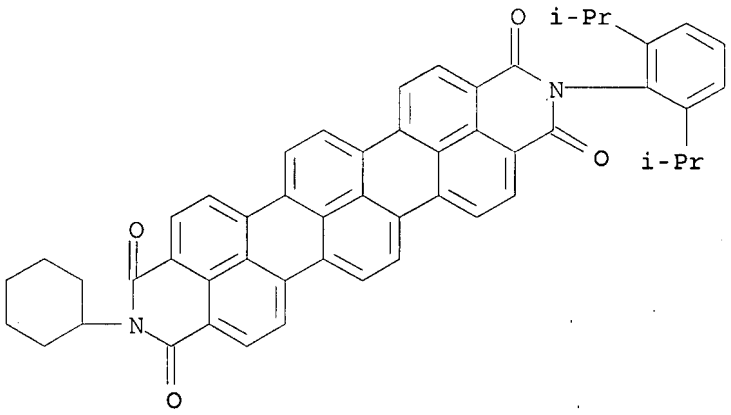


I

AB The invention relates to a method for producing imides I, wherein R and R' are independently hydrogen, possibly substituted C1-30-alkyl, C5-8-cycloalkyl, aryl or heteroaryl consisting in (a) reacting a diborane in the presence an aprotic organic solvent, a transition metal-based catalyst and a base with (a1) a N-substituted 9-bromoperylene-3,4-dicarboxylic acid imide or (a2) a 4- and N-substituted naphthalene-1,8-dicarboxylic acid imide, (b1) reacting the resulting N-substituted 9-(dioxaborolan-2-yl)perylene-3,4-dicarboxylic acid imide in the presence of an organic solvent preferably mixed with water, a transition metal-based catalyst and a base in a Suzuki coupling reaction with a 4- and N-substituted naphthalene-1,8-dicarboxylic acid imide or (b2) reacting the resulting N-substituted 4-(dioxaborolan-2-yl)naphthalene-1,8-dicarboxylic acid imide in the presence of an organic solvent preferably mixed with water, a transition metal-based catalyst and a base in a Suzuki coupling reaction with a N-substituted 9-bromo-perylene-3,4-dicarboxylic acid imide and (c) cyclizing the resulting 9-(4-naphthalene-1,8-dicarboxylic acid imide)perylene-3,4-dicarboxylic acid imide in a medium exhibiting hydroxy and amino functions and containing an insol. base. This process produces the diimides without the use of Sn compds. and(or) strong bases in high amts. in good yields and short reaction times. Thus, I (R = 2,6-diisopropylphenyl, R' = cyclohexyl) was manufactured by heating PhMe containing



IT 452084-79-6P, N-Cyclohexyl-N'-(2,6-diisopropylphenyl)-3,4,11,12-Terrylenetetracarboxylic diimide
RL: IMF (Industrial manufacture); PREP (Preparation)
(producing N-substituted terrylenetetracarboxylic acid diimides in Suzuki reactions)
RN 452084-79-6 CAPLUS
CN Benzo[13,14]pentapheno[3,4,5-def:10,9,8-d'e'f']diisoquinoline-1,3,10,12(2H,11H)-tetrone, 2-[2,6-bis(1-methylethyl)phenyl]-11-cyclohexyl- (9CI) (CA INDEX NAME)



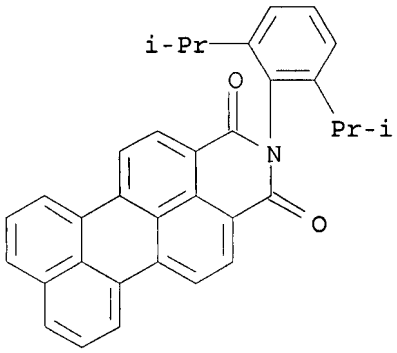
REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9 ANSWER 9 OF 15 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2005:590447 CAPLUS
DOCUMENT NUMBER: 143:231352
TITLE: Synthesis and modification of terrylenediimides as high-performance fluorescent dyes
AUTHOR(S): Nolde, Fabian; Qu, Jianqiang; Kohl, Christopher; Pschirer, Neil G.; Reuther, Erik; Muellen, Klaus
CORPORATE SOURCE: Max-Planck-Institute for Polymer Research, Mainz, 55128, Germany
SOURCE: Chemistry--A European Journal (2005), 11(13), 3959-3967
CODEN: CEUJED; ISSN: 0947-6539
PUBLISHER: Wiley-VCH Verlag GmbH & Co. KGaA
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 143:231352

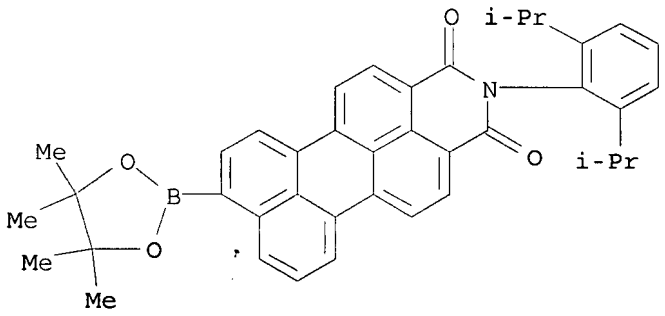
AB Two synthetic approaches to terrylenediimides, highly photostable fluorescent dyes, are described. One of the approach replaces a previously used toxic stannyl derivative with a boronic ester as the starting material. Terrylenediimides are synthesized in a straightforward procedure that makes large quantities available. The other route includes an efficient cross-coupling reaction followed by a cyclodehydrogenation. Monofunctionalization of the imide structure allows terrylenediimides to be coupled with a variety of compds., for example, by Suzuki crosscoupling, which can lead to an array of terrylenediimides with new functional groups such as hydroxy, amino, or carboxy groups needed to link up with other mols. The functionalization in the bay region is used to tune the properties of terrylenediimides and extend the range of applications, for example, by introducing water solubility These tetrasubstituted terrylenediimides offer, depending on the substituents used, properties such as good solubility in common organic solvents, water solubility, or NIR absorption.

IT 165550-61-8 695152-67-1
RL: RCT (Reactant); RACT (Reactant or reagent)
(synthesis and modification of terrylenediimides as high-performance fluorescent dyes)

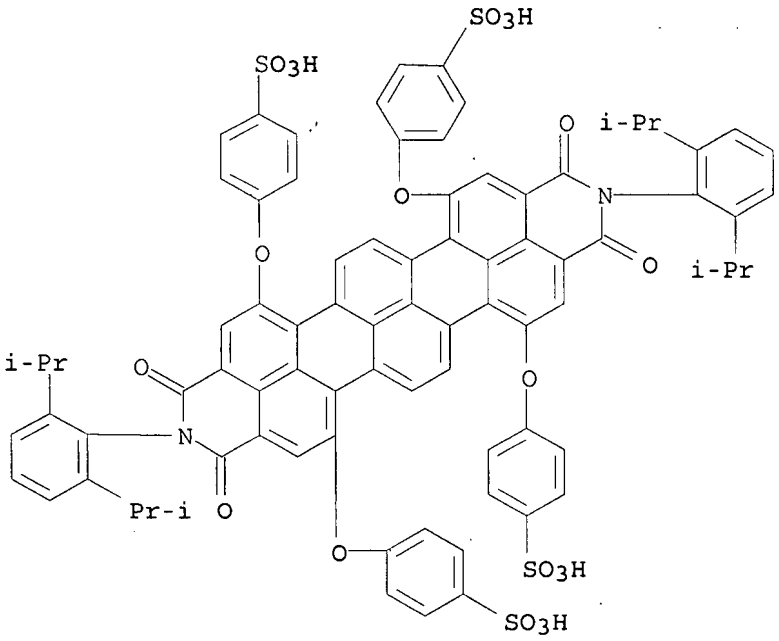
RN 165550-61-8 CAPLUS
CN 1H-Perylo[3,4-cd]pyridine-1,3(2H)-dione, 2-[2,6-bis(1-methylethyl)phenyl]- (CA INDEX NAME)



RN 695152-67-1 CAPLUS
CN 1H-Perylo[3,4-cd]pyridine-1,3(2H)-dione, 2-[2,6-bis(1-methylethyl)phenyl]-8-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)- (CA INDEX NAME)



IT 187536-84-1P 187536-92-1P 861454-89-9P 862852-52-6P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)



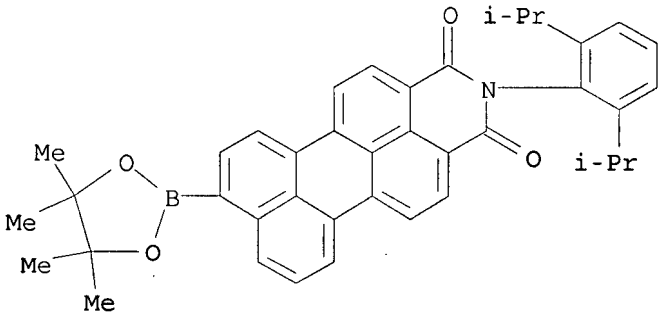
REFERENCE COUNT: 43 THERE ARE 43 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9 ANSWER 10 OF 15 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2004:288757 CAPLUS
DOCUMENT NUMBER: 141:7581
TITLE: Synthesis and characterization of dendritic multichromophores based on rylene dyes for vectorial transduction of excitation energy
AUTHOR(S): Weil, Tanja; Reuther, Erik; Beer, Cornelia; Muellen, Klaus
CORPORATE SOURCE: Max-Planck-Institute for Polymer Research, Mainz, 55128, Germany
SOURCE: Chemistry--A European Journal (2004), 10(6), 1398-1414
CODEN: CEUJED; ISSN: 0947-6539
PUBLISHER: Wiley-VCH Verlag GmbH & Co. KGaA
DOCUMENT TYPE: Journal
LANGUAGE: English

AB The synthesis of dendritic multichromophores based on a rigid polyphenylene scaffold is presented. Different rylene chromophores are incorporated into the core, the branches, and the surface of the dendrimer. In this way, two generations of dendritic dyads consisting of a terrylenediimide core, a stiff polyphenylene scaffold, and a perylenemonoimide periphery were obtained. Furthermore, the first synthetic approach to a dendritic triad is introduced. The outer sphere of this macromol. is formed by naphthalenemonoimide chromophores, whereas perylenemonoimide groups are located in the dendritic scaffold, and the terrylenediimide chromophore serves as a core mol. This multichromophore absorbs over the whole range of the visible spectrum and shows well-separated absorption envelopes. In the course of dendrimer synthesis new attempts towards a straightforward functionalization strategy for rylene dyes are also presented.

IT 695152-67-1
RL: RCT (Reactant); RACT (Reactant or reagent)
(in preparation of dendritic multichromophores based on rylene dyes for vectorial transduction of excitation energy)
RN 695152-67-1 CAPLUS

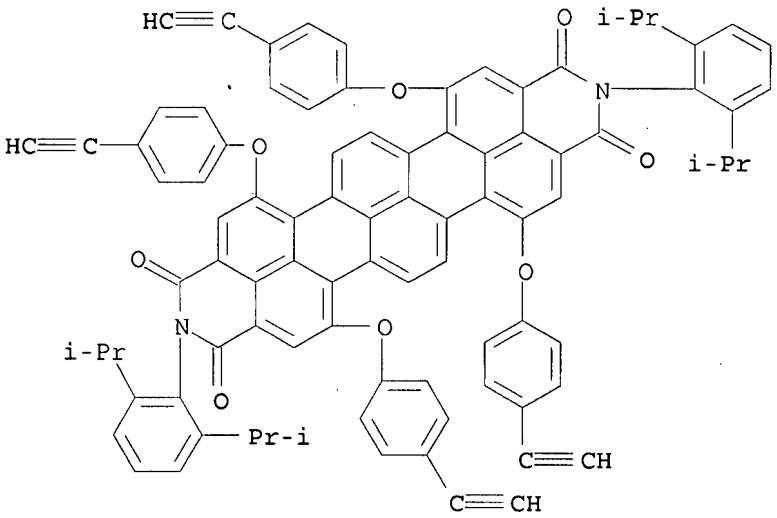
CN 1H-Perylo[3,4-cd]pyridine-1,3(2H)-dione, 2-[2,6-bis(1-methylethyl)phenyl]-8-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)- (CA INDEX NAME)



IT 457047-90-4P 457047-93-7P 457047-99-3P
457048-06-5P 464885-23-2P 634612-93-4P
695152-66-0P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(in preparation of dendritic multichromophores based on rylene dyes for vectorial transduction of excitation energy)

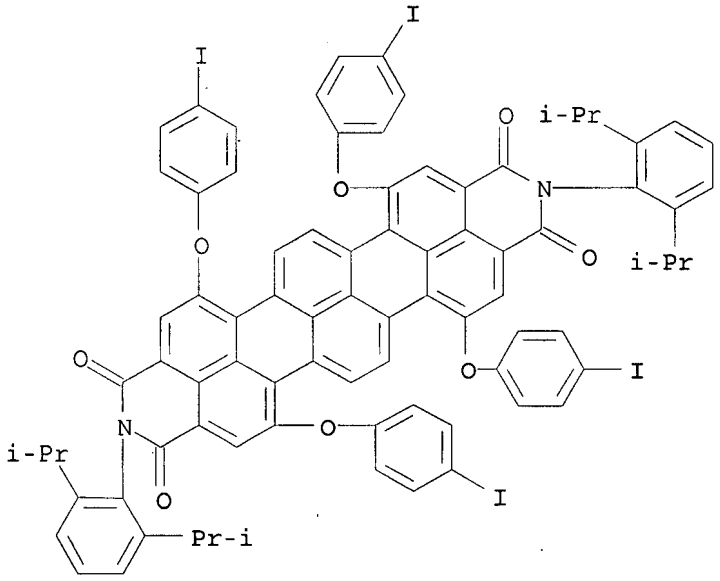
RN 457047-90-4 CAPLUS

CN Benzo[13,14]pentapheno[3,4,5-def:10,9,8-d'e'f']diisoquinoline-1,3,10,12(2H,11H)-tetrone, 2,11-bis[2,6-bis(1-methylethyl)phenyl]-5,8,14,17-tetrakis(4-ethynylphenoxy)- (9CI) (CA INDEX NAME)

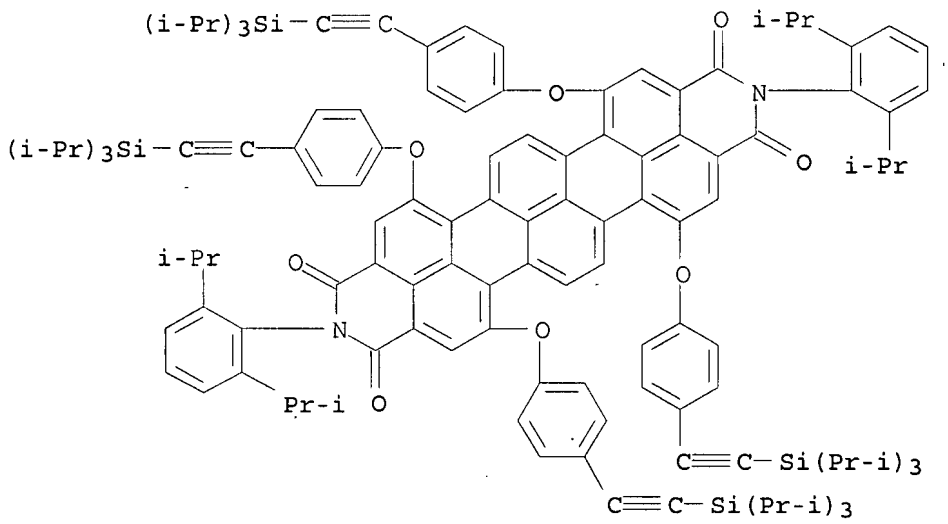


RN 457047-93-7 CAPLUS

CN 1H-Perylo[3,4-cd]pyridine-1,3(2H)-dione, 2-[2,6-bis(1-methylethyl)phenyl]-8-[4-(3-oxo-2,4,5-triphenyl-1,4-cyclopentadien-1-yl)phenyl]- (CA INDEX NAME)



RN 695152-66-0 CAPLUS
CN Benzo[13,14]pentapheno[3,4,5-def:10,9,8-d'e'f']diisoquinoline-1,3,10,12(2H,11H)-tetrone, 2,11-bis[2,6-bis(1-methylethyl)phenyl]-5,8,14,17-tetrakis[4-[[tris(1-methylethyl)silyl]ethynyl]phenoxy]- (9CI) (CA INDEX NAME)



REFERENCE COUNT: 59 THERE ARE 59 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9 ANSWER 11 OF 15 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2002:471575 CAPLUS
DOCUMENT NUMBER: 137:233014
TITLE: Shape-persistent, fluorescent polyphenylene diads and a triad for efficient vectorial transduction of excitation energy
AUTHOR(S): Weil, Tanja; Reuther, Erik; Mullen, Klaus
CORPORATE SOURCE: Max-Planck-Institut fur Polymerforschung Ackermannweg 10, Mainz, 55128, Germany

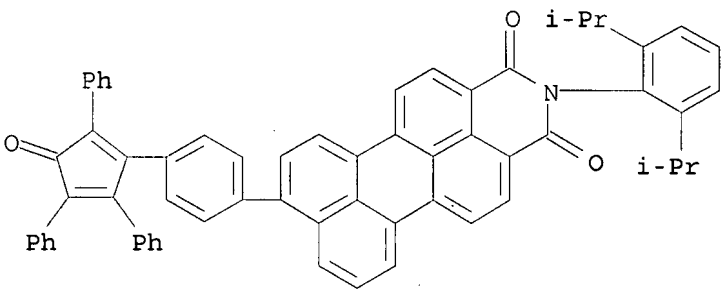
SOURCE: Angewandte Chemie, International Edition (2002), 41(11), 1900-1904
CODEN: ACIEF5; ISSN: 1433-7851
PUBLISHER: Wiley-VCH Verlag GmbH
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Dendritic multi-chromophores based on a rigid polyphenylene scaffold contain up to three different types of rylene chromophores incorporated at the focal point, the scaffold, and the periphery of the dendrimer. The light-harvesting array design is based on a polyphenylene dendrimer bearing terrylene tetracarboxydiimide in the center and perylene dicarboxymonoimide and naphthalene dicarboxymonoimide chromophores in the periphery. The synthesis of the multi-chromophores is based on convergent and divergent approach by repetitive Diels-Alder cycloaddn. of the core with cyclopentadienone bearing the resp. chromophores. An energy gradient between the periphery and the core is thus generated and allows an efficient transfer of excitation energy.

IT 457047-93-7
RL: PRP (Properties); RCT (Reactant); RACT (Reactant or reagent)
(preparation and structure and vectorial excitation energy transfer in shape-persistent fluorescent polyphenylene dendrimers with multi-chromophore periphery)

RN 457047-93-7 CAPLUS

CN 1H-Perylo[3,4-cd]pyridine-1,3(2H)-dione, 2-[2,6-bis(1-methylethyl)phenyl]-8-[4-(3-oxo-2,4,5-triphenyl-1,4-cyclopentadien-1-yl)phenyl]- (CA INDEX NAME)

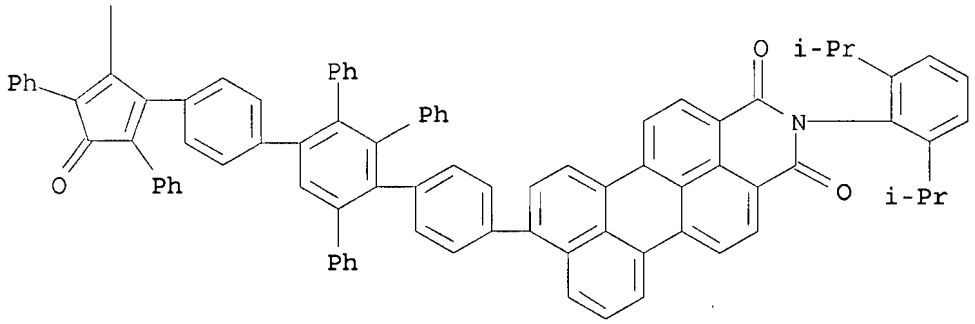


IT 187536-95-4DP, reaction products with polyphenylene dendrimers
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
(preparation and structure and vectorial excitation energy transfer in shape-persistent fluorescent polyphenylene dendrimers with multi-chromophore periphery)

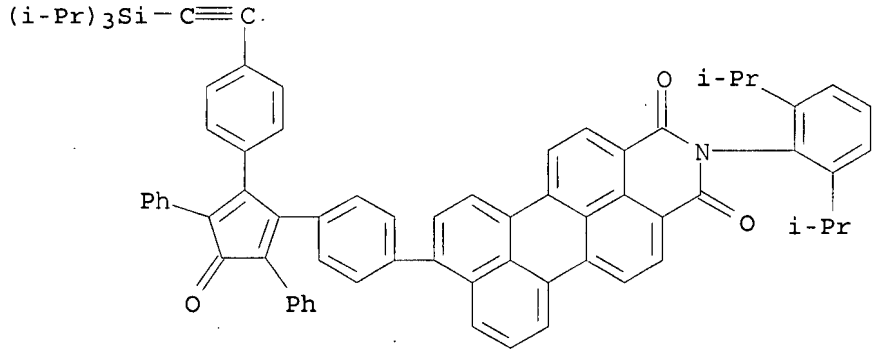
RN 187536-95-4 CAPLUS

CN Benzo[13,14]pentapheno[3,4,5-def:10,9,8-d'e'f']diisoquinoline-1,3,10,12(2H,11H)-tetrone, 2,11-bis[2,6-bis(1-methylethyl)phenyl]- (9CI) (CA INDEX NAME)

PAGE 2-A



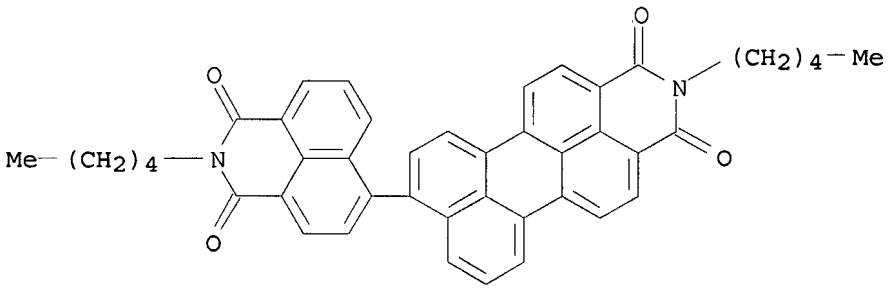
RN 457048-06-5 CAPLUS
CN 1H-Perylo[3,4-cd]pyridine-1,3(2H)-dione, 2-[2,6-bis(1-methylethyl)phenyl]-8-[4-[3-oxo-2,4-diphenyl-5-[4-[[tris(1-methylethyl)silyl]ethynyl]phenyl]-1,4-cyclopentadien-1-yl]phenyl]- (9CI) (CA INDEX NAME)



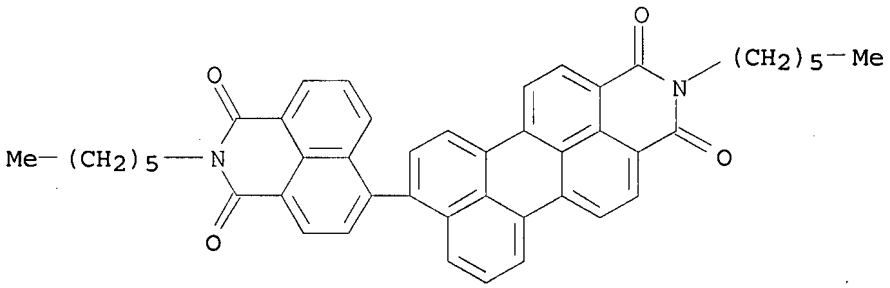
REFERENCE COUNT: 35 THERE ARE 35 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9 ANSWER 12 OF 15 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2002:70694 CAPLUS
DOCUMENT NUMBER: 136:371066
TITLE: Synthesis and properties of terrylenedicarboximide derivatives
AUTHOR(S): Nagao, Yukinori; Iwawaki, Hironobu; Kozawa, Kozo
CORPORATE SOURCE: Department of Industrial Chemistry, Faculty of Science and Technology, Science University of Tokyo, Chiba, 278-8510, Japan
SOURCE: Heterocycles (2002), 56(1-2), 331-340
CODEN: HTCYAM; ISSN: 0385-5414
PUBLISHER: Japan Institute of Heterocyclic Chemistry
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 136:371066
AB Terrylenedicarboximide derivs. were prepared by the coupling of N-alkyl-9-tributylstannylperylene-3,4-dicarboximides with 4-bromo-1,8-naphthalimide derivative and the following ring closure reaction. Spectral properties in solution or in the solid state and the thermal stability of these derivs. were investigated.
IT 423774-66-7P 423774-67-8P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(intermediate; synthesis and properties of terrylenedicarboximide derivative dyes)

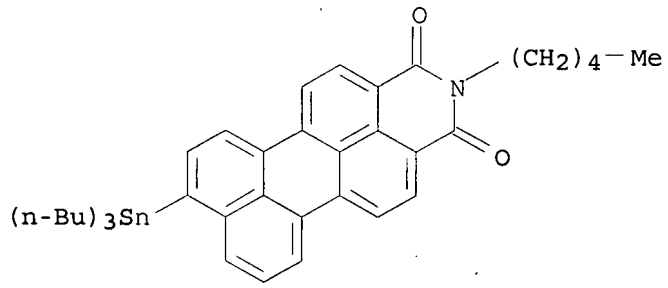
RN 423774-66-7 CAPLUS
CN 1H-Perylo[3,4-cd]pyridine-1,3(2H)-dione, 8-(2,3-dihydro-1,3-dioxo-2-pentyl-1H-benz[de]isoquinolin-6-yl)-2-pentyl- (9CI) (CA INDEX NAME)



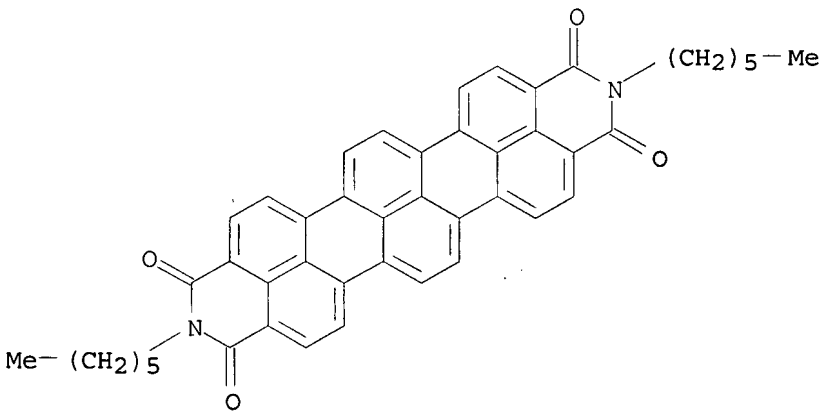
RN 423774-67-8 CAPLUS
CN 1H-Perylo[3,4-cd]pyridine-1,3(2H)-dione, 8-(2-hexyl-2,3-dihydro-1,3-dioxo-1H-benz[de]isoquinolin-6-yl)-2-hexyl- (9CI) (CA INDEX NAME)



IT 423774-70-3 423774-71-4
RL: RCT (Reactant); RACT (Reactant or reagent)
(starting material; synthesis and properties of terrylenedicarboximide derivative dyes)
RN 423774-70-3 CAPLUS
CN 1H-Perylo[3,4-cd]pyridine-1,3(2H)-dione, 2-pentyl-8-(tributylstannyl)- (9CI) (CA INDEX NAME)



RN 423774-71-4 CAPLUS
CN 1H-Perylo[3,4-cd]pyridine-1,3(2H)-dione, 2-hexyl-8-(tributylstannyl)- (9CI) (CA INDEX NAME)



REFERENCE COUNT: 12 THERE ARE 12 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

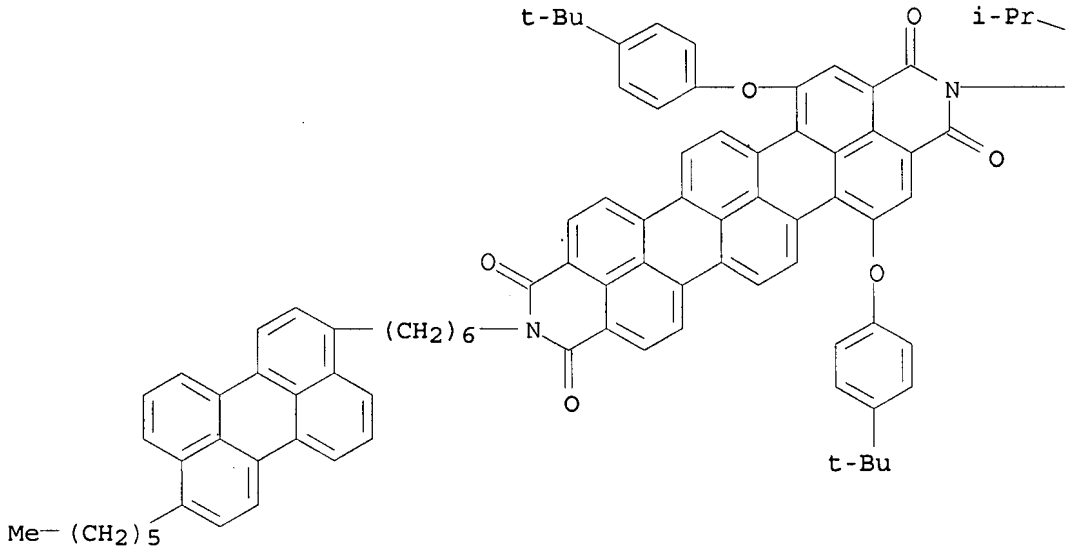
L9 ANSWER 13 OF 15 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 1999:515555 CAPLUS
DOCUMENT NUMBER: 131:244591
TITLE: A bichromophore based on perylene and terylene for energy transfer studies at the single-molecule level
AUTHOR(S): Schlichting, Peter; Duchscherer, Bettina; Seisenberger, G.; Basche, Thomas; Brauchle, Christoph; Mullen, Klaus
CORPORATE SOURCE: Max-Planck-Institut fur Polymerforschung, Mainz, D-55128, Germany
SOURCE: Chemistry--A European Journal (1999), 5(8), 2388-2395
CODEN: CEUJED; ISSN: 0947-6539
PUBLISHER: Wiley-VCH Verlag GmbH
DOCUMENT TYPE: Journal
LANGUAGE: English

AB A functionalized dialkylperylene and a modified terylenetetracarboxylic diimide (TTCDI) were joined together by a hexanediyl spacer. The resulting bichromophoric mol. is a suitable model system for donor-acceptor energy transfer studies at the single-mol. level. With its absorption and fluorescence maximum at shorter wavelengths (λmax = 450 nm, λn = 458 nm) the dialkylperylene acts as the donor, while the TTCDI with λmax = 665 nm and λn = 705 nm is the acceptor mol. The synthetic route to the new bichromophoric mol. and its optical properties (UV/visible and fluorescence spectroscopy) are presented. Energy transfer from the perylene to the terylene moiety was confirmed by conventional ensemble fluorescence excitation and emission spectroscopy. Single mols. of the bichromophore embedded in poly(vinyl butyral) were imaged with a scanning confocal optical microscope at room temperature by selectively exciting the perylene chromophore and detecting the terylene emission.

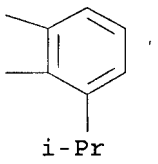
IT 244168-59-0P
RL: PRP (Properties); SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(dye; preparation of bichromophoric dye based on perylene and terylene for energy transfer studies at single-mol. level)

RN 244168-59-0 CAPLUS
CN Benzo[13,14]pentapheno[3,4,5-def:10,9,8-d'e'f']diisoquinoline-1,3,10,12(2H,11H)-tetrone, 2-[2,6-bis(1-methylethyl)phenyl]-5,17-bis[4-(1,1-dimethylethyl)phenoxy]-11-[6-(9-hexyl-3-perylenyl)hexyl]- (9CI) (CA INDEX NAME)

PAGE 1-A



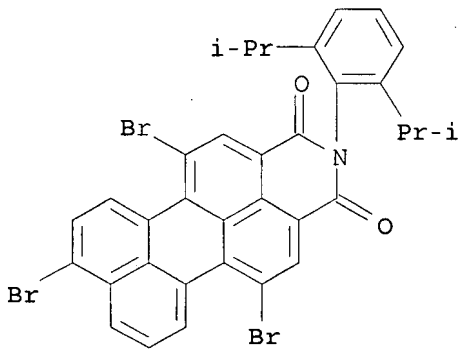
PAGE 1-B



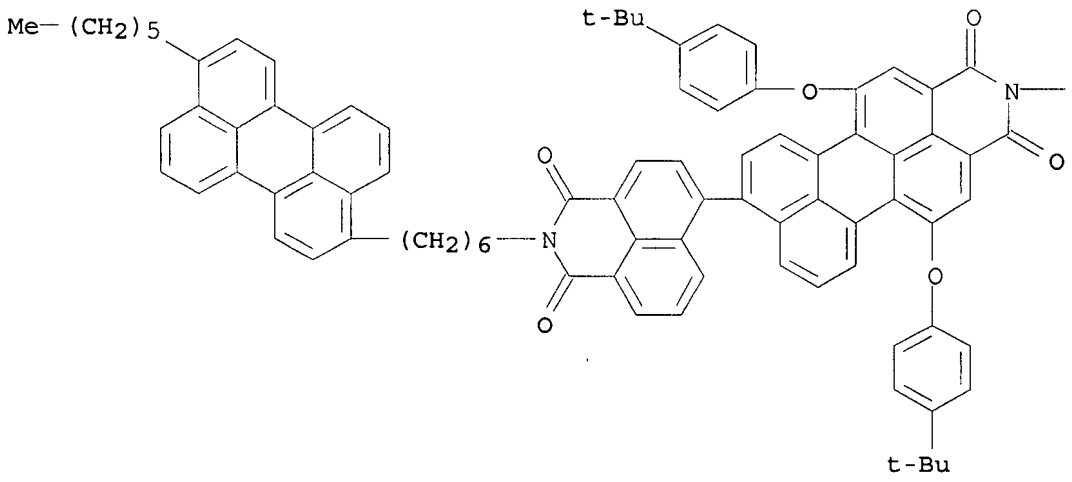
IT 165550-65-2P 165550-66-3P 187536-87-4P
244168-63-6P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(intermediate; preparation of bichromophore based on perylene and terylene for energy transfer studies at single-mol. level)

RN 165550-65-2 CAPLUS

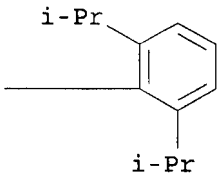
CN 1H-Perylo[3,4-cd]pyridine-1,3(2H)-dione, 2-[2,6-bis(1-methylethyl)phenyl]-5,8,12-tribromo- (9CI) (CA INDEX NAME)



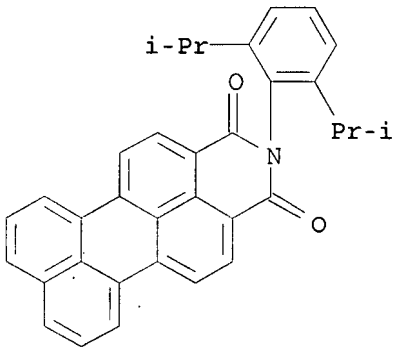
PAGE 1-A



PAGE 1-B



IT 165550-61-8
RL: RCT (Reactant); RACT (Reactant or reagent)
(starting material; preparation of bichromophore based on perylene and terylene for energy transfer studies at single-mol. level)
RN 165550-61-8 CAPLUS
CN 1H-Perylo[3,4-cd]pyridine-1,3(2H)-dione, 2-[2,6-bis(1-methylethyl)phenyl]- (CA INDEX NAME)



REFERENCE COUNT: 20 THERE ARE 20 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9 ANSWER 14 OF 15 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 1999:163163 CAPLUS

DOCUMENT NUMBER: 130:244248
TITLE: Organic electric-field light-emitting device containing terrylene imide
INVENTOR(S): Tamura, Shinichiro
PATENT ASSIGNEE(S): Sony Corp., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 20 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

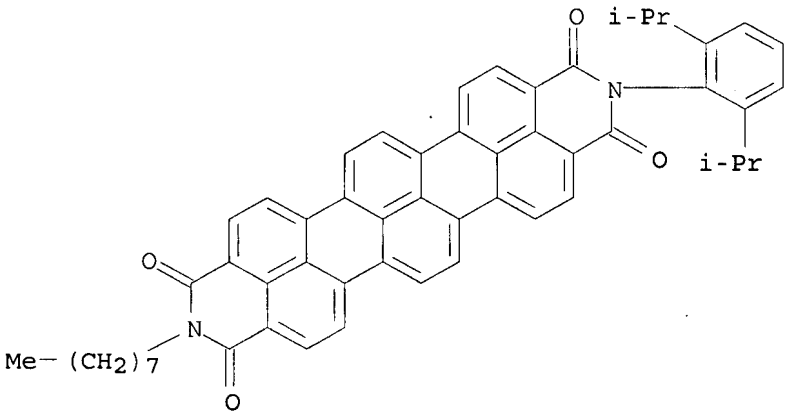
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 11067450	A	19990309	JP 1997-217525	19970812

PRIORITY APPLN. INFO.: JP 1997-217525 19970812
OTHER SOURCE(S): MARPAT 130:244248

AB The device has an organic laminated structure having a terrylene imide derivative-containing light-emitting region between an anode and a cathode. The device shows red light-emission with excellent color purity, luminance, and stability.

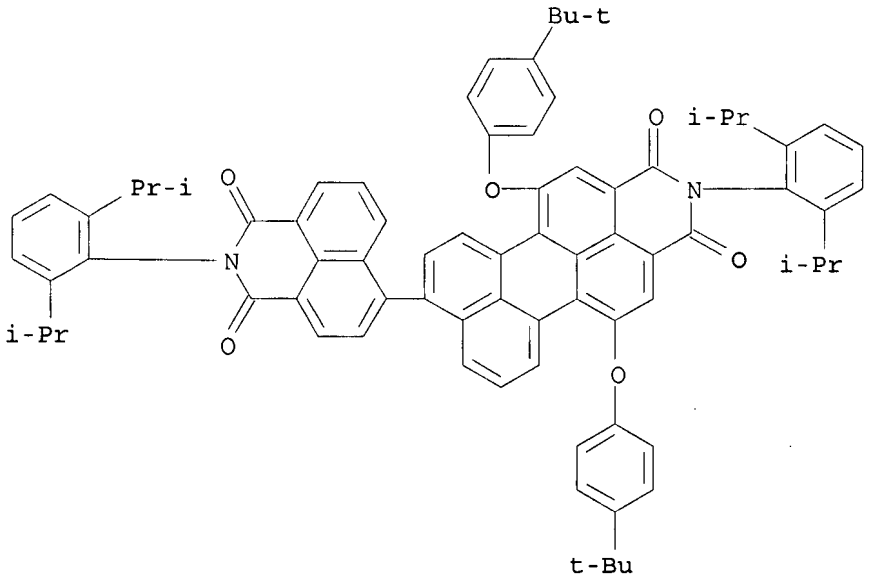
IT 187536-85-2P 187536-95-4P 187536-96-5P
RL: DEV (Device component use); IMF (Industrial manufacture); PREP (Preparation); USES (Uses)
(elec.-field red-light-emitting device containing terrylene imide)

RN 187536-85-2 CAPLUS
CN Benzo[13,14]pentapheno[3,4,5-def:10,9,8-d'e'f']diisoquinoline-1,3,10,12(2H,11H)-tetrone, 2-[2,6-bis(1-methylethyl)phenyl]-11-octyl- (CA INDEX NAME)

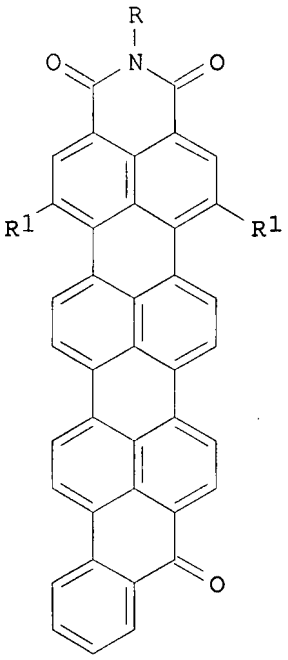


RN 187536-95-4 CAPLUS
CN Benzo[13,14]pentapheno[3,4,5-def:10,9,8-d'e'f']diisoquinoline-1,3,10,12(2H,11H)-tetrone, 2,11-bis[2,6-bis(1-methylethyl)phenyl]- (9CI) (CA INDEX NAME)

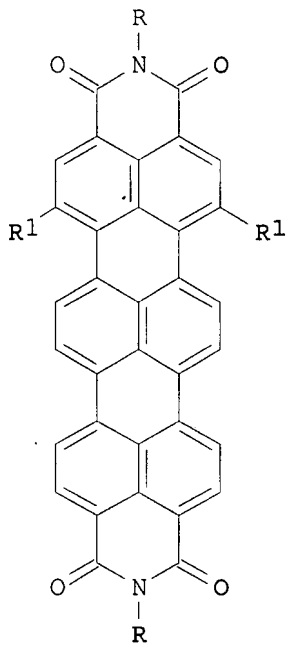
(CA INDEX NAME)



L9 ANSWER 15 OF 15 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 1997:187868 CAPLUS
DOCUMENT NUMBER: 126:187360
TITLE: Terrylenimides: new NIR fluorescent dyes
AUTHOR(S): Holtrup, Frank O.; Mueller, Gert R. J.; Quante, Heribert; De Feyter, Steven; De Schryver, Frans C.; Muellen, Klaus
CORPORATE SOURCE: Max-Planck-Institut Polymerforschung, Mainz, 55128, Germany
SOURCE: Chemistry--A European Journal (1997), 3(2), 219-225
CODEN: CEUJED; ISSN: 0947-6539
PUBLISHER: VCH
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 126:187360
GI



I



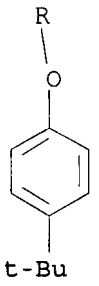
II

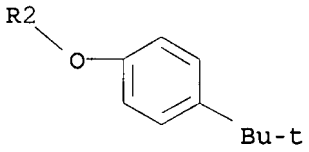
AB Terrylenimides (I and II: R = alkyl, aryl; R1 = H, tert-butylphenoxy) represent a new class of blue colorants, exhibiting absorption maxima at 650 to 700 nm and fluorescence emissions in the NIR region (673 to 750 nm). The terrylenimides were synthesized by means of various organometallic coupling reactions, catalyzed by transition metal complexes (Ni0, Pd0) and starting from the aromatic bromides, boronic acids, or organotin compds. The terrylenimides have all the properties expected of excellent fluorescent dyes: high extinction yields, and very good thermal, chemical, and photochem. stabilities. Owing to its extended π system, I can reversibly accept four neg. charges. By varying the substituents, I and II can be modified to serve either as soluble dyes or as insol. pigments.

IT 187536-77-2P 187536-79-4P 187536-82-9P
187536-83-0P 187536-84-1P 187536-86-3P
187536-87-4P 187536-89-6P 187536-92-1P
187536-94-3P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(intermediate; preparation of terrylenimide near-IR fluorescent dyes)

RN 187536-77-2 CAPLUS

CN 1H-Perylo[3,4-cd]pyridine-1,3(2H)-dione, 5,6,11,12-tetrakis[4-(1,1-dimethylethyl)phenoxy]-8-(7-oxo-7H-benz[de]anthracen-3-yl)-2-propyl- (9CI) (CA INDEX NAME)





REFERENCE COUNT: 30 THERE ARE 30 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

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FILE 'REGISTRY' ENTERED AT 12:44:05 ON 13 NOV 2007
L1 STRUCTURE UPLOADED
L2 STRUCTURE UPLOADED
L3 2 S L1
L4 108 S L1 FULL
L5 21 S L2
L6 578 S L2 FULL

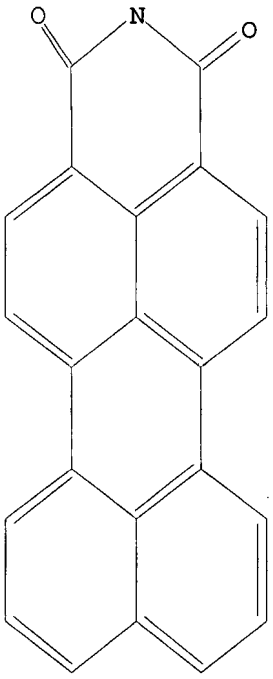
FILE 'CAPLUS' ENTERED AT 12:46:41 ON 13 NOV 2007
L7 22 S L4/PREP
L8 99 S L6/RCT
L9 15 S L7 AND L8

=> d l1
L1 HAS NO ANSWERS
L1 STR

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

Structure attributes must be viewed using STN Express query preparation.

=> d l2
L2 HAS NO ANSWERS
L2 STR



Structure attributes must be viewed using STN Express query preparation.

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